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### LISTING OF CLAIMS

#### **Claim 1**

A device to measure individual or grouped cell voltages of a fuel cell stack having conductive areas to monitor fuel cell stack performance to provide diagnostic data, said device comprising:

a meter connected to individual or grouped cell conductive areas to measure the voltage and impedance of said individual or grouped cells changes in the measurement or the time response of the measurements; and

a monitor coupled to said meter to report on the performance of the fuel cell stack, such that the measurements of said individual or grouped cells are used to report on the performance of said fuel cell stack and further including a matrix array of opto isolators wherein no common ground is employed by the meter.

#### **Claim 2 (cancel)**

#### **Claim 3**

The device of Claim 1, wherein said meter instructs said monitor to report on individual cells, grouped cells, or entire fuel cell stack performance.

#### **Claim 4**

The device of Claim 55 wherein said microprocessor determines the performance of individual cells or cell groups based on the present operating current of the fuel cell stack.

#### **Claim 5**

The device of Claim 55 wherein said microprocessor determines the performance of individual cells or cell groups based on measurements of the time response of the voltage of said individual cells or cell groups during a transient response caused by a high rate of change of fuel cell stack current.

#### **Claim 6**

The device of Claim 55 wherein said microprocessor determines the performance of individual cells or cell groups based on measurements of the frequency response of the voltage of said individual cells or cell groups during a response caused by a periodic change of fuel cell stack current.

#### **Claim 7**